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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,363	07/31/2003	Bryan Youngpeter	81131516(19277)	2153

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EXAMINER

GILLAN, RYAN P

ART UNIT	PAPER NUMBER
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3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/631,363

Applicant(s)

YOUNGPETER ET AL.

Examiner

Ryan P. Gillan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4,5,7,8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4,5,7,8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Due to new grounds of rejection this Office Action is made Non-Final.

Claim Rejections - 35 USC § 112

Specification

The amendment filed 1/5/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: There is no differential pressure across valve 38, rod 62 and plunger 52 due to the presence of the axial passage in valve 38 and axial passages 64, 66.

Applicant is required to cancel the new matter in the reply to this Office Action.

2. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation, "there being no differential pressure across the plunger tending to displace the plunger axially," is not supported by the specification, in such a way, as to comply with the written description requirement.

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4, 5, 7, 8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimura et al. (5,860,797) in view of Yokota et al. (6,041,883). Fujimura et al. teach a housing (1) defining a bore (15) having an axis, a fluid discharge port (18a) communicating with the bore at a first axial location, and a fluid bypass port (1a) at a second axial location having an opening communicating with the bore at a second axial location; said bore comprising a first bore end and a second bore end and a pump outlet passage communicating with the bore at the first end (integral with 18a); a sleeve (18) secured onto the housing at said second bore end and extending along the axis away from the housing; a flow control valve (14) slideably received in the bore for opening and closing the inlet (col. 3 lines 40-43), said flow control valve defining an inlet for opening the fluid bypass port for admitting fluid thereto (col. 3 lines 40-54); the inlet having a size dependent upon the position of the flow control valve within the bore, wherein the flow control valve slides axially to vary the size to the inlet through which flow can enter the bypass port from the bore and contains a means for biasing the valve in the open position (col. 3 lines 40-54), the biasing means the means comprising a coil spring (17) including a first end and a second end axially opposite the first end, seated against displacement

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relative to the housing at the first end and seated against the plunger (16) at the second end; pumping elements are disposed within the housing and communicating with the fluid bypass port (clearly seen in figure 2), for pumping fluid to the fluid discharge port, said pumping elements located within the housing and comprising a cam chamber (12) and a rotor (5) having retractable vanes (11) disposed within the cam chamber, a plunger (16) adjacent the second bore end and secured to and contacting the flow control valve located within the sleeve, and axially displaceable along the axis in response to the force produced by the spring, for moving the flow control valve along the axis (col. 3 lines 40-54); a bracket (integral with the housing) secured to the second bore end and formed with an axial passage and a second bore, the sleeve secured to the bracket; a hollow rod (16a) secured to the flow control valve, extending through the axial passage of the bracket and into the sleeve, providing an annular space between the sleeve and a radial outer surface of the rod (clearly seen in figure 3).

5. Fujimura et al. fail to teach a sleeve secured onto the housing at said second bore end and extending along the axis away from the housing, a plunger disposed within the sleeve, axially displaceable along the axis and operatively connected to the flow control valve, and an electromagnetic coil disposed about the sleeve and adapted for applying an electromagnetic field to the plunger to vary the size of the inlet and thereby regulate the flow of fluid into the fluid bypass port; a coil spring located in the sleeve, wherein the spring urges the flow control valve to open the inlet bypass port; the sleeve including an end cap, and wherein plunger includes a rear end adjacent the end cap and a pressure

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equalization passage extending from the rear end and communicating with fluid adjacent the flow control valve.

6. Yokota et al. (6,041,883) teach a sleeve (4, integral with the actuator) secured onto the housing at said second bore end and extending along the axis away from the housing (clearly seen in figure 1), a plunger (37) disposed within the sleeve, axially displaceable along the axis and operatively connected to the flow control valve (14), and an electromagnetic coil (4) disposed about the sleeve and adapted for applying an electromagnetic field to the plunger to vary the size of the inlet and thereby regulate the flow of fluid into the fluid bypass port (col. 6 lines 44-67); a coil spring (17) located in the sleeve, seated against axial displacement relative to the housing at the first end and seated against the plunger at the second end (clearly seen in figure 1), wherein the spring urges the flow control valve to open the inlet bypass port and the electromagnetic force urges the control valve to close the inlet of the bypass port (col.6 lines 44-67); the sleeve including an end cap (36), and wherein plunger includes a rear end adjacent the end cap and a pressure equalization passage (39) extending from the rear end and communicating with fluid adjacent the flow control valve. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujimora et al. by replacing the hydraulic actuation with an electromagnetic coil of Yokota et al. operably connected to the plunger to regulate the flow of liquid into the fluid bypass port as a means of electronically controlling the valve in response to turning maneuvers of a vehicle, using the

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steering angle to calibrate minimum or maximum flow requirements (col. 8 lines 45-50).

Response to Arguments

7. Applicant's arguments filed 1/5/07 have been fully considered but they are not persuasive. Applicant argues that there is support for the claim limitation "there being no differential pressure across the plunger tending to displace the plunger axially," however, the structure disclosed by the Applicant in the specification only permits the effect of "no differential pressure across the plunger" and does not explicitly require it, to the exclusion of a pressure differential, under every circumstance. Therefore, this amended negative limitation to claims 11, 12 and 13 is not supported by the specification.

8. The applicant also argues that the coil spring (17) taught by Yokota does not oppose the electromagnetic force produced by coil (54) and the spring does not tend to open the bypass port. However, as the electromagnetic force tends to open or close the bypass port, the spring will create a bias that is opposed to such movement and will tend to open and close the bypass port (col. 6 lines 44-67).

9. Applicant's arguments with respect to the failure of the prior art to disclose disclose a coil spring that is seated against axial displacement relative to the housing, been considered but are moot in view of the new ground(s) of rejection. As cited above **Fujimura** discloses coil spring (17) secured to the housing (1) and seated against axial displacement.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:30 am - 5:00 pm; Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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